

**AMENDMENTS TO THE DRAWINGS**

The attached drawing sheet includes changes to Figure 4.

Sheet 1: Please add a "Prior Art" legend to Fig. 4 as shown.

Attachment:      One (1) Replacement sheet

### **REMARKS**

This communication is a full and timely response to the non-final Office Action dated September 20, 2005 (Paper No./Mail Date 20050915). By this communication, Figure 4 has been amended to include a "Prior Art" legend. Further, claims 13-16 have been canceled without prejudice or disclaimer of the underlying subject matter and claims 4 and 12 have been amended.

Claim 4 has been amended to recite switching means for controlling said amplified signal output, and said switching means being placed on an output side of said second amplifier, that said output signal from said first amplifier passes through said variable filtering means and is amplified by said second amplifier, that said variable filtering means has a first cutoff frequency, a second cutoff frequency, and a third cutoff frequency, that after said non-readout state is switched to said readout state, said variable filtering means has said first cutoff frequency during a first prescribed time period, that said switching means is turned on, and said variable filtering means has said second cutoff frequency during a second prescribed time period after said first prescribed time period has passed, that said variable filtering means has a third cutoff frequency after said second prescribed time period has passed, and that said first cutoff frequency is higher than said second cutoff frequency and said second cutoff frequency is higher than said third cutoff frequency. Support for the subject matter added to claim 4 can be found variously throughout the specification and claims, for example, in claims 5, 7, and 8. No new matter has been added.

Claim 12 has been amended to recite that switching means for controlling an amplified signal output is placed on an output side of said second amplifier, that said variable filtering means has a first cutoff frequency, a second cutoff frequency, and a third cutoff frequency, that after said non-readout state is switched to said readout state, said variable filtering means has said first cutoff frequency during a first prescribed time period, that after said first prescribed time period has passed, said switching means is turned on, and said variable filtering means has said second cutoff frequency during a second prescribed time period, and that said variable filtering means has a third cutoff frequency after said second prescribed time period; and that said first cutoff frequency is higher than said second cutoff frequency, and said second cutoff frequency is higher than said third cutoff frequency. Support for the subject matter added to

claim 12 can be found variously throughout the specification and claims, for example, in claims 13, 15, and 16. No new matter has been added.

Claims 1-4 and 9-12 are pending where claims 1, 4, 9, and 12 are independent.

### **Drawing Objections**

Figure 4 was objected to for failing to include a "Prior Art" legend. Applicant has amended Figure 4 to include a "Prior Art" legend. Accordingly, Applicant respectfully requests that the objection to the drawings be withdrawn.

### **Rejections Under 35 U.S.C. §103**

Claims 1-16 were rejected under 35 U.S.C. §103(a) as unpatentable over *Hachisuka et al.*—U.S. Patent No. 6,479,898 in view of *Tsunoda*—U.S. Patent No. 6,101,054. Applicant respectfully traverses this rejection.

Claim 1 recites an amplifier apparatus, which is switched from a non-readout state to a readout state based on a control signal, for reading out a signal containing a servo signal by signal readout means, amplifying the signal by an amplifier, and outputting said amplified signal, wherein said amplifier apparatus comprises filtering means for allowing a high frequency part of a signal to pass through, thereby filtering said signal, said filtering means having a first cutoff frequency during a first prescribed time period after said readout state is initiated, a second cutoff frequency that is lower than said first cutoff frequency during a second prescribed time period after said first prescribed time period has passed, and a third cutoff frequency that is lower than said second cutoff frequency after said second prescribed time period has passed.

Claim 4 recites an amplifier apparatus, which is switched from a non-readout state to a readout state based on a control signal, for reading out a signal containing a servo signal by signal readout means, amplifying said signal by an amplifier, and outputting said amplified signal, wherein said an amplifier apparatus comprises variable filtering means with a plurality of cutoff frequencies, a first amplifier, a second amplifier; and switching means for controlling said amplified signal output, and said switching means being placed on an output side of said second amplifier, wherein said output signal from said first amplifier passes through said variable filtering means and is amplified by said second amplifier, wherein said variable filtering means has a first cutoff frequency, a second cutoff frequency, and a third cutoff frequency, wherein after said non-readout state is switched to said readout state, said variable filtering means has

said first cutoff frequency during a first prescribed time period, wherein said switching means is turned on, and said variable filtering means has said second cutoff frequency during a second prescribed time period after said first prescribed time period has passed, wherein said variable filtering means has a third cutoff frequency after said second prescribed time period has passed, and wherein said first cutoff frequency is higher than said second cutoff frequency and said second cutoff frequency is higher than said third cutoff frequency.

Claim 9 recites a magnetic recording and reproducing apparatus comprising an amplifier apparatus, which is switched from a recording state to a readout state based on a control signal, for reading out a signal containing a servo signal by signal readout means, amplifying said signal by an amplifier, and outputting said amplified signal, wherein said amplifier apparatus comprises filtering means for allowing a high frequency part of a signal to pass through, thereby filtering said signal, said filtering means having a first cutoff frequency during a prescribed time period after said readout state is initiated, a second cutoff frequency that is lower than said first cutoff frequency during a second prescribed time period after said first prescribed time has passed, and a third cutoff frequency that is lower than said second cutoff frequency after said second prescribed time period has passed.

Claim 12 recites a magnetic recording and reproducing apparatus comprising an amplifier apparatus, which is switched from a non-readout state to a readout state based on a control signal, for reading out a signal containing a servo signal by signal readout means, amplifying said signal by an amplifier, and outputting said amplified signal, wherein said magnetic recording and reproducing apparatus comprising an amplifier apparatus comprises variable filtering means with a plurality of cutoff frequencies, a first amplifier, and a second amplifier; wherein an output signal from said first amplifier passes through said variable filtering means and is amplified by said second amplifier, wherein switching means for controlling an amplified signal output is placed on an output side of said second amplifier, wherein said variable filtering means has a first cutoff frequency, a second cutoff frequency, and a third cutoff frequency, wherein after said non-readout state is switched to said readout state, said variable filtering means has said first cutoff frequency during a first prescribed time period, wherein after said first prescribed time period has passed, said switching means is turned on, and said variable filtering means has said second cutoff frequency during a second prescribed time period, wherein said variable filtering means has a third cutoff frequency after said second prescribed

time period; and wherein said first cutoff frequency is higher than said second cutoff frequency, and said second cutoff frequency is higher than said third cutoff frequency.

In summary, each of claims 1 and 9 recite that said filtering means has a first cutoff frequency during a first prescribed time period after said readout state is initiated, a second cutoff frequency that is lower than said first cutoff frequency during a second prescribed time period after said first prescribed time period has passed, and a third cutoff frequency that is lower than said second cutoff frequency after said second prescribed time period has passed. Moreover, each of claims 4 and 12 recite that after said non-readout state is switched to said readout state, said variable filtering means has said first cutoff frequency during a first prescribed time period, that said switching means is turned on, and said variable filtering means has said second cutoff frequency during a second prescribed time period after said first prescribed time period has passed, that said variable filtering means has a third cutoff frequency after said second prescribed time period has passed, and that said first cutoff frequency is higher than said second cutoff frequency and said second cutoff frequency is higher than said third cutoff frequency.

*Hachisuka* discloses a device that performs high frequency amplification of a read-out voltage from an MR read head using a head amplifier circuit 20. The output voltage from the head amplifier circuit 20 is applied to a high pass filter 231 in a noise detection circuit 23 to derive only its high-frequency component. Next, a signal representing the derived high-frequency component from the filter 231 is applied to the comparators 232 and 233 and compared with the threshold voltages  $V_{TH}$  and  $V_{TL}$  to judged whether it is within a predetermined range or not. *See Hachisuka col. 7, lines 26-35.*

The Office Action acknowledges that *Hachisuka* fails to disclose, teach, or suggest at least said filtering means has a first cutoff frequency during a first prescribed time period after said readout state is initiated, a second cutoff frequency that is lower than said first cutoff frequency during a second prescribed time period after said first prescribed time period has passed, and a third cutoff frequency that is lower than said second cutoff frequency after said second prescribed time period has passed, as recited in claims 1 and 9; and that after said non-readout state is switched to said readout state, said variable filtering means has said first cutoff frequency during a first prescribed time period, that said switching means is turned on, and said variable filtering means has said second cutoff frequency during a second prescribed time period after said first prescribed time period has passed, that said variable filtering means has a third

cutoff frequency after said second prescribed time period has passed, and that said first cutoff frequency is higher than said second cutoff frequency and said second cutoff frequency is higher than said third cutoff frequency, as recited in claims 4 and 12 (previously recited in claims 8 and 16, respectively).

*Tsunoda* discloses the use of a programmable high pass filter 23 that having cutoff frequency parameters  $f_c$  that each can be set to different values. *See* col. 2, lines 40-42. *Tsunoda*, however, fails to disclose or suggest that these different values are applied at predetermined time periods as recited in the claims. Moreover, because *Tsunoda* is silent with regard to the application of cutoff frequencies to compensate for thermal asperity. One of ordinary skill in the art can only assume that a single cut-off frequency is programmed and applied to provide suitable compensation. Further evidence that *Tsunoda* fails to disclose the application of different cut-off frequencies at predetermined intervals is the lack of a timing diagram that illustrates when each frequency parameter  $f_c$  is applied. The only timing charts provided by *Tsunoda* reflect the value of the DC level of the read signal at various intervals, and provide no insight regarding an associated value of the cutoff frequency of the high pass filter.

In summary, *Hachisuka* and *Tsunoda* either singly or combined fail to disclose, teach, or suggest at least said filtering means has a first cutoff frequency during a first prescribed time period after said readout state is initiated, a second cutoff frequency that is lower than said first cutoff frequency during a second prescribed time period after said first prescribed time period has passed, and a third cutoff frequency that is lower than said second cutoff frequency after said second prescribed time period has passed, as recited in claims 1 and 9; and that after said non-readout state is switched to said readout state, said variable filtering means has said first cutoff frequency during a first prescribed time period, that said switching means is turned on, and said variable filtering means has said second cutoff frequency during a second prescribed time period after said first prescribed time period has passed, that said variable filtering means has a third cutoff frequency after said second prescribed time period has passed, and that said first cutoff frequency is higher than said second cutoff frequency and said second cutoff frequency is higher than said third cutoff frequency, as recited in claims 4 and 12. At best, the combined references teach a programmable high pass filter having cutoff frequency parameters  $f_c$  that each can be set to different values. Accordingly, a *prima facie* case for obviousness has not been established.

To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA

1974). Moreover, obviousness "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." ACS Hosp. Sys. V. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). For at least the above reasons, Applicant respectfully requests that the rejection of claims 1, 4, 9, and 12 under 35 U.S.C. §103 be withdrawn, and these claims be allowed.

Claims 2 and 3 depend from claim 1, and claims 10 and 11 depend from claim 9. By virtue of this dependency, Applicant submits that claims 2 and 3 are allowable for at least the same reasons given above with respect to claim 1. In addition, Applicant submits that claims 2 and 3 are further distinguished over *Hachisuka* and *Tsunoda* by the additional elements recited therein, and particularly with respect to each claimed combination. Applicant respectfully requests, therefore, that the rejection of claims 1, 4, 9, and 12 under 35 U.S.C. §103 be withdrawn, and these claims be allowed.

**Conclusion**

Based on at least the foregoing amendments and remarks, Applicant submits that claims 1-4 and 9-12 are allowable, and this application is in condition for allowance. Accordingly, Applicant requests a favorable examination and consideration of the instant application. In the event the instant application can be placed in even better form, Applicant requests that the undersigned attorney be contacted at the number listed below.

Applicant believes no fee is due with this request. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2869 from which the undersigned is authorized to draw.

Dated: December 9, 2005

Respectfully submitted,

By   
Ronald P. Kananen

Registration No.: 24,104

Shawn B. Cage

Registration No.: 51,522

Attorneys for Applicant

**RADER, FISHMAN & GRAUER, PLLC**

Lion Building

1233 20<sup>th</sup> Street, N.W., Suite 501

Washington, D.C. 20036

Tel: (202) 955-3750

Fax: (202) 955-3751

Customer No. 23353

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